



**NATIONAL SCIENCE FOUNDATION**

**Notice of Permit Applications Received  
under the Antarctic Conservation Act of 1978**

**AGENCY:** National Science Foundation.

**ACTION:** Notice of Permit Applications Received under the Antarctic Conservation Act of 1978, P.L. 95-541.

**SUMMARY:** The National Science Foundation (NSF) is required to publish a notice of permit applications received to conduct activities regulated under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act at title 45 part 671 of the Code of Federal Regulations. This is the required notice of permit applications received.

**DATES:** Interested parties are invited to submit written data, comments, or views with respect to this permit application by **[INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. This application may be inspected by interested parties at the Permit Office, address below.

**ADDRESSES:** Comments should be addressed to Permit Office, Room 755, Division of Polar Programs, National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230.

**FOR FURTHER INFORMATION CONTACT:** Nature McGinn, ACA Permit Officer, at the above address or [ACApemits@nsf.gov](mailto:ACApemits@nsf.gov).

**SUPPLEMENTARY INFORMATION:** The National Science Foundation, as directed by the Antarctic Conservation Act of 1978 (Public Law 95-541), as amended by the Antarctic Science, Tourism and Conservation Act of 1996, has developed regulations for the establishment of a permit system for various activities in Antarctica and designation of certain animals and certain geographic areas requiring special protection. The regulations establish such a permit system to designate Antarctic Specially Protected Areas.

**APPLICATION DETAILS:**

1. Applicant

Permit Application: 2017-013

Dr. George Watters, Director, AMLR Program, Southwest Fisheries Science Center, National Marine Fisheries Service, 8901 La Jolla Shores Drive, La Jolla, CA 92037

Activity for Which Permit is Requested

Waste Management Permit. This permit application pertains to ship and shore-based research and logistic activities conducted by the National Oceanic and Atmospheric Administration's (NOAA) Antarctic Marine Living Resources (AMLR) Program. The AMLR Program conducts research from a vessel platform in the Antarctic Peninsula region, collecting environmental, oceanographic, primary productivity, finfish and prey data (zooplankton abundance and distribution, particularly Antarctic krill *Euphausia superba*). In addition, the applicant conducts krill-dependent, land-based predator investigations at two temporary field camps in the South Shetland Islands, Antarctica: Cape Shirreff and Copacabana.

Cape Shirreff is a temporary, multi-year field camp on Livingston Island, South Shetland Islands, Antarctica. During each year of the proposed permitting period (2016-2021), the field camp will typically be occupied for less than five months ( $\leq 150$  days; normally around 120 days) during the austral spring/summers and will house 4 – 6 researchers. Semiannually for short durations only (usually less than two weeks), an additional group of two to four researchers may reside in a temporary tent structure; tent location will be setup to minimize impact on flora and fauna. In addition, the AMLR Program utilizes an all-terrain vehicle (ATV) that is stored at the Cape Shirreff field camp.

Copacabana field camp is located in Antarctic Specially Protected Area (ASPA) Number 8 (Western Shore of Admiralty Bay, King George Island, South Shetland Islands). The approximate coordinates of the camp are 62° 10' South latitude by 58° 28' West longitude. The camp consists of four structures connected by walkways. All buildings and equipment are properly sealed and stored over the winters such that they are inaccessible to wildlife. The AMLR Program recognizes the status of Copacabana as an ASPA (No. 128) and adheres to all protection afforded as such. During the proposed permitting period (2016-2021), the field camp may be occupied for significantly shorter periods than historically, typically less than one month ( $\leq 30$  days) during the austral summer of each year.

Research equipment deployed near both field will include a snow measurement gauge and remote, autonomous cameras and will be removed from the field at the conclusion of the work. The AMLR program will also continue their use of a vertical take-off and landing unmanned aerial vehicle (VTOL-UAV) for conducting census surveys of animal colonies. The VTOL-UAV that the applicant proposes to deploy has GPS capability and will fly missions up to 30 minutes at altitudes between 75 and 300 feet. The aircraft are operated by trained, experienced pilots and flight crews. Observers will be used to maintain visual line-of-sight with the UAV any time the aircraft is more than 300 m from the pilot. Appropriate safety measures will be in place and best practices for operating in polar environments will be employed.

Wastes and designated pollutants associated with typical field camp operations will be generated, released, stored, and removed. The field camps will release wastes to air in the form of emissions resulting from the combustion of gasoline, propane, and charcoal. Releases of wastes to water will be limited to greywater and human sewage only. Sewage is disposed of directly into the sea with appropriate mixing. Wastes and designated pollutants resulting from scientific research include materials used to mark animals (e.g. paints, dyes, tags) and doubly-labeled water used to measure energetics and body condition in fur seals. All radioisotope materials will be handled to minimize the risk of inadvertent release.

Releases associated with camp logistics and operations occur daily throughout the period of camp occupation. Releases resulting from research activities occur episodically throughout the field season. Other than the above releases, all other wastes will be packaged (or otherwise contained) and removed from the site for proper disposal under approved guidelines. As far as possible, removal via transfer to the AMLR research vessel will occur annually. Waste awaiting retrograde will be stored under cover (e.g., in buildings, fish boxes, tents, or under tarps) to ensure that it is isolated from wildlife and is not scattered by wind.

Over the period 2017–2021, the AMLR Program plans to conduct three surveys including 30-90 days of vessel operations in the Antarctic Peninsula region annually during the austral summer. The vessel follows a standardized survey grid, and depending on the focus any given year, additional smaller sections of the

region are surveyed. During the surveys, the Program deploys drifters and expendable bathythermographs (XBTs) and expendable conductivity-temperature and depth (XCTDS) probes to collect hydrographic data within the study area to better understand the relationship between the target species and their environment, and to help partner programs (NOAA Global Drifter Program) with deployment of their instruments. The applicant plan annual deployments up to 150 XBTs, 20 XCTDS and 55 drifters. The U.S. AMLR Program may deploy upwards of three mooring arrays which will release up to 6 ferrous weights (train wheels), at the recovery of the mooring(s). Each mooring weight set will weigh between 750 and 1500lbs, depending on the magnitude of the current speed in the vicinity of the mooring locations. These mooring weights will not be recovered. In addition to drifters and XBTs, the AMLR Program also deploys and recovers a variety of gears that are not intentionally released into the environment. These may include both oceanographic instruments and fishing gears, for example: conductivity-temperature-depth profilers (CTD), plankton nets, commercial bottom trawls, continuous plankton records, winged optical particle counters, towed current profilers, and acoustic buoys.

#### Location

Cape Shirreff, Livingston Island; Copacabana, western shore of Admiralty Bay; Western Antarctic Peninsula

#### Dates

October 1, 2016 – July 30, 2021

Nadene G. Kennedy,  
Polar Coordination Specialist,  
Division of Polar Programs.

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